

Title (en)
ELECTRONIC TUNING ANTENNA SYSTEM

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Application
EP 80302020 A 19800616

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Abstract (en)
[origin: US4381566A] At the feed side of each antenna element having transmitting conductor paths formed in continuous meandering shapes and having distributed constant impedances are electrically connected a variable tuning unit including a voltage variable reactance circuit and an impedance adjusting reactance element, thereby constituting an antenna circuit. A voltage variable capacitor is connected within the voltage variable reactance circuit. Antenna feed terminals are connected through a coaxial cable to input terminals of a remote-set radio receiver. A tuning control signal generated within the radio receiver is fed to a voltage variable capacitor within the voltage variable reactance circuit of the antenna circuit through the coaxial cable. The tuning control signal allows the antenna circuit to resonate with a particular frequency within a frequency band, the frequency being variable. The antenna element having the distributed constant inductance functions so as to have the best possible antenna radiation efficiency at resonant frequency signal by being in combination with the variable tuning unit and the antenna element is considerably reduced in size. At the resonant frequency signal, the characteristic impedance at the feed terminals of the antenna circuit becomes equal to that impedance at the receiving input terminals at the radio receiver connected to the antenna circuit, whereby an RF signal at the resonant frequency is selected and fed most efficiency to the radio receiver through the coaxial cable.

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Cited by
EP0079001A1; EP0367555A3; CN100438356C; EP1617564A4; EP1819013A1; EP0133799A3; FR2660117A1; CN106229687A; CN113540799A; EP0506333A1; US5602558A; US5699071A; FR2508713A1; US7557773B2; US10220602B2; US10186769B1; WO2013095734A1; WO2014133391A1; US9041617B2; US9923272B2; JP2010263329A

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